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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,660	02/09/2004	Kiriko Yamada	KYO.P0027	5094

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Edward G. Greive
Renner, Kenner, Greive, Bobak, Taylor & Weber
Fourth Floor
First National Tower
Akron, OH 44308-1456

EXAMINER	
MALKOWSKI, KENNETH J	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,660	YAMADA ET AL.	
	Examiner	Art Unit	
	Kenneth J. Malkowski	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/9/04*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date ~~2/9/04~~. 5/a/06; 11/20/06; 4/8/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,963,194 to Umeda et al. in view of U.S. Patent No. 5,584,838 to Rona et al

With respect to claims 1 and 5, Umeda discloses an optical-axis directional indicating apparatus for optical communication (3, Figure 1)(column 11 lines 25-63 (pointing of the cursor on CRT screen 1 moves according to the inclination operation of input apparatus 3; input apparatus 3 detects axis direction of incoming beam O, and sends inclination quantities θx and θy to the main frame)) comprising: a photoreceptor having a light-receiving surface (column 11 lines 48-51 (light output is detected with a four-divided light receiving portions provided in input apparatus 3)) and a plurality of optical receiving elements arranged on the surface in a first direction and a second direction orthogonal to the first direction (Figure 3 shows receiving elements 5a-5d arranged on a surface in both an x and y direction wherein the x and y directions are shown in a mutually orthogonal relationship), to receive a transmitted light beam (beam O from emitter 2, Figure 1); a detector to detect levels of the light beam received at the optical receiving elements (4, Figure 2, light detecting section)(column 12 lines 65-67

(detecting section 4)). However, Umeda does not specifically disclose a plurality of optical display elements indicating axis alignment using by usage of a switch circuit to selectively turn off or turn on said optical display elements. Rona, from the same field of endeavor discloses a plurality of optical display elements (94-97, Figure 11) indicating axis alignment (column 8 lines 10-19 (LEDS turn on and off in an attempt to locate maximum signal strength for accurate axis alignment))(columns 8-9 lines 55-67 and 1-7 (LEDS provide positional information regarding accuracy of alignment by turning on and off) using by usage of a switch circuit to selectively turn off or turn on said optical display elements (column 11 lines 39-50 (LEDS are switched on and off as a result of comparators 257, 258, 263 and 264)). Therefore, it would have been obvious to one of ordinary skill in the art to implement the LED control and display as disclosed by Ronna et al. into the optical receiving element as disclosed by Umeda. The motivation for doing so would have been to allow increased ease of manual axis alignment of the optical transmission system for the system operator (column 2 lines 42-44)(column 2 lines 45-63).

With respect to claims 2 and 6, Umeda in view of Rona discloses the optical-axis directional indicating apparatus according to claim 1 wherein the switch circuit includes a comparator (Rona: 257, 258, 263 and 264 Figure 11) to compare given reference values determined based on allowable ranges of deviation (Rona: columns 13-14 lines 52-67 and 1-10 (positive and negative thresholds are established in reference to a comparator wherein the output is connected to respective LEDS which activate or deactivate said LEDS based on comparison of input with threshold values)) of the

optical axis of the light beam in the first and second directions on the light-receiving surface of the photoreceptor (Umeda: column 11 lines 48-51 (light output is detected with a four-divided light receiving portions provided in input apparatus 3)) and a first absolute value of a difference in the levels of the light beam received at the optical receiving elements arranged in the first direction and also a second absolute value of a difference in the levels of the light beam received at the optical receiving elements arranged in the second direction (Umeda: column 12 lines 23-50, expression 3 calculates Δx and Δy which is indicative of differences in light bean levels received in a first and second direction)) the switch circuit selectively turn on or off the display elements in accordance with results of comparison, thus indicating that the deviation of the optical axis in the first and/or the second direction is within or out of allowable ranges (Rona: column 11 lines 55-67 and 1-10 (switch circuit in Figure 11 turns LEDS on and off))(Rona: columns 13-14 lines 52-67 and 1-10 (positive and negative thresholds are established in reference to a comparator wherein the output is connected to respective LEDS which activate or deactivate said LEDS based on comparison of input with threshold values)).

With respect to claims 3 and 7, Umeda in view of the optical-axis directional indicating apparatus according to claim 2 (Figure 4)(82, Figure 11)(Figure 30) further comprises a communication-available indicating display element that is turned on by the switch circuit to indicate that optical communication is available when the first and second absolute values are smaller than the reference values (91, Figure 4)(99, Figure

11)(column 25 lines 23-29 (central LEDS 91-99 will be turned on when proper axial alignment has been acehived and the remaining positional arrows will be turned off)).

With respect to claims 4 and 8, Umeda in view of Rona disclose the optical-axis directional indicating apparatus according to claim 2 wherein each of the display elements includes a plurality of display segments arranged in the first or the second direction (Rona: Rona teaches a plurality of display elements in the first direction 95 and 97 as well as the second direction 94 and 96, Figure 11) to be selectively turned on or off by the switch circuit in accordance with the results of comparison, thus indicating in stages that the deviation of the optical axis in the first or the second direction is within or out of the allowable range in the first or the second direction (columns 11-12 lines 51-67 and 1-10).

With respect to claims 9 and 10 Umeda discloses an optical wireless communications system (Figure 1)(column 1 lines 15-25 (high-speed wireless transmission/ reception system)) comprising: a first optical wireless communications apparatus for transmitting a light beam (2, Figure 1); and a second optical wireless communications apparatus, for receiving the light beam (3, Figure 1), the second optical wireless communications apparatus including: a photoreceptor having a light-receiving surface and a plurality of optical receiving elements arranged on the surface in a first direction and a second direction orthogonal to the first direction (Figure 3 shows receiving elements 5a-5d arranged on a surface in both an x and y direction wherein the x and y directions are shown in a mutually orthogonal relationship), to receive the light beam (beam O from emitter 2, Figure 1); a detector to detect levels of the light beam

received at the optical receiving elements (4, Figure 2, light detecting section)(column 12 lines 65-67 (detecting section 4)); and an on-screen generator to generate an on-screen signal in accordance with the levels of the light beam detected by the detector (screen 1, Figure 1 accepts output from on-screen generator). However Umeda fails to disclose a monitor screen connected to second optical wireless communication apparatus including a display of a plurality of indications arranged in the first and second directions so as to correspond to the optical receiving elements of the photoreceptor wherein the indications being selectively turned on or off in accordance with the levels of the light beam detected by the detector, to indicate whether or not an optical axis of the light beam is deviated in the first and/or the second direction on the light-receiving surface of the photoreceptor. Despite this, such a monitor is well known in the art and is not considered a patentably distinct limitation. Rona, from the same field of endeavor discloses a plurality of optical display elements (94-97, Figure 11) indicating axis alignment (column 8 lines 10-19 (LEDS turn on and off in an attempt to locate maximum signal strength for accurate axis alignment))(columns 8-9 lines 55-67 and 1-7 (LEDS provide positional information regarding accuracy of alignment by turning on and off) using by usage of a switch circuit to selectively turn off or turn on said optical display elements (column 11 lines 39-50 (LEDS are switched on and off as a result of comparators 257, 258, 263 and 264)). Therefore, it would have been obvious to one of ordinary skill in the art to implement the LED control and display as disclosed by Ronna et al. into the optical receiving element as disclosed by Umeda. The motivation for doing so would have been to allow increased ease of manual axis

alignment of the optical transmission system for the system operator (column 2 lines 42-44)(column 2 lines 45-63).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to wireless transmission systems and alignment indicator displays in general:

U.S. Patent No. 4,824,367 is cited for alignment indicator purposes

U.S. Patent No. 6,504,634 is cited to show a transmission system with improved pointing accuracy

U.S. Patent No. 6,504,634 is cited to show optical axis adjustment

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J. Malkowski whose telephone number is (571) 272-5505. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KJM 10/15/06

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER